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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/987,455

DATE: 01/15/2002
 TIME: 11:56:43

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 Output Set: N:\CRF3\01152002\I987455.raw

ENTERED

4 <110> APPLICANT: Aranya Manosroi
 5 Jiradej Manosroi
 6 Chatchai Tayapiwatana
 7 Friedrich Goetz
 8 Rolf-Guenther Werner
 10 <120> TITLE OF INVENTION: Methods for Large Scale Production of Recombinant
 11 DNA-Derived tPA or K2S Molecules
 13 <130> FILE REFERENCE: 0652.2190001
 C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/987,455
 C--> 15 <141> CURRENT FILING DATE: 2001-11-14
 15 <150> PRIOR APPLICATION NUMBER: 60/268,574
 16 <151> PRIOR FILING DATE: 2001-02-15
 18 <150> PRIOR APPLICATION NUMBER: GB 0027779.8
 19 <151> PRIOR FILING DATE: 2000-11-14
 21 <160> NUMBER OF SEQ ID NOS: 25
 23 <170> SOFTWARE: PatentIn Ver. 2.1
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 18
 27 <212> TYPE: DNA
 28 <213> ORGANISM: Artificial Sequence
 30 <220> FEATURE:
 31 <223> OTHER INFORMATION: Description of Artificial Sequence: coding
 32 sequence of N-terminal part of K2S protein
 34 <400> SEQUENCE: 1
 35 tctgagggaacacagtgac 18
 38 <210> SEQ ID NO: 2
 39 <211> LENGTH: 1128
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 45 sequence for OmpA-K2S fusion protein
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 49 gcggcctctg agggaaacag tgactgctac tttgggaatg ggtcagccta ccgtggcacg 120
 50 cacagcctca ccgagtcggg tgccctcctgc ctcccgtgga attccatgat cctgataggc 180
 51 aaggtttaca cagcacagaa ccccagtgcc caggcactgg gcctgggcaa acataattac 240
 52 tgccggaatc ctgatgggga tgccaagccc tgggtgccacg tgctgaagaa ccgcaggctg 300
 53 acgtgggagt actgtgatgt gccctcctgc tccacctgcg gcctgagaca gtacagccag 360
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 56 atcagctcct gctggattct ctctgcccgc cactgcttcc aggagaggtt tccgccccac 540
 57 cacctgacgg tgatcttggg cagaacatac cgggtggtcc ctggcgagga ggagcagaaa 600
 58 tttgaagtcg aaaaatacat tgtccataag gaattcgatg atgacactta cgacaatgac 660
 59 attgcgctgc tgcagctgaa atcggattcg tcccgtctgtg cccaggagag cagcgtggtc 720
 60 cgcactgtgt gccttcccc ggcggaacctg cagctgccgg actggacgga gtgtgagctc 780
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64 gacgcctgcc agggcgattc gggaggcccc ctggtgtgtc tgaacgatgg ccgcatgact 1020
65 ttggtgggca tcatcagctg gggcctgggc tgtggacaga aggatgtccc ggggtgtgtac 1080
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72 <213> ORGANISM: Escherichia coli
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76 gcggcc 66
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82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Description of Artificial Sequence: coding
86 sequence for K2S protein
88 <400> SEQUENCE: 4
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90 ctacccgagt cgggtgcctc ctgcctcccg tggaaattcca tgatcctgat aggcaagggt 120
91 tacacagcac agaaccaccag tgcccaggca ctgggcctgg gcaaacataa ttactgccgg 180
92 aatcctgatg gggatgccaa gccctgggtg cacgtgctga agaaccgcag gctgacgtgg 240
93 gagtactgtg atgtgccctc ctgctccacc tgcggcctga gacagtacag ccagcctcag 300
94 tttgcacata aaggagggtc cttcgccgac atgcctccc acccctggca ggctgccatc 360
95 tttgccaagc acaggaggtc gcccgagag cggttcctgt gcgggggcat actcatcagc 420
96 tcctgctgga ttctctctgc cgcccactgc ttccaggaga gggttccgcc ccaccacctg 480
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98 gtcgaaaaat acattgtcca taaggaattc gatgatgaca cttacgacaa tgacattgcg 600
99 ctgctgcagc tgaaatcgga ttctgccgc tgtgccagg agagcagcgt ggtccgcact 660
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101 tacggcaagc atgaggcctt gtctcctttc tattcggagc ggctgaagga ggctcatgtc 780
102 agactgtacc catccagccg ctgcacatca caacatttac ttaacagaac agtcaccgac 840
103 aacatgctgt gtgctggaga cactcggagc ggcgggcccc aggcaactt gcacgacgcc 900
104 tgccagggcg attcgggagg cccctgggtg tgtctgaacg atggccgcat gactttggtg 960
105 ggcatcatca gctggggcct gggctgtgga cagaaggatg tcccgggtgt gtacacaaaag 1020
106 gttaccaact acctagactg gattcgtgac aacatgcgac cgtga 1065
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111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <223> OTHER INFORMATION: Description of Artificial Sequence: coding
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118 <400> SEQUENCE: 5
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120 gcggcctctg agggaaacag tgactgctac tttgggaatg ggtagccta ccgtggcacg 120
121 cacagcctca ccgagtcggg tgctcctcgc ctcccgtgga attccatgat cctgataggc 180

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122 aaggtttaca cagcacagaa cccagtgcc caggcactgg gcctgggcaa acataattac 240
123 tgccggaatc ctgatgggga tgccaagccc tggtgccacg tgctgaagaa ccgcaggctg 300
124 acgtgggagt actgtgatgt gccctcctgc tccacctgcg gcctgagaca gtacagccag 360
125 cctcagtttc gcatcaaagg agggctcttc gccgacatcg cctcccaccc ctggcaggct 420
126 gccatctttg ccaagcacag gaggtcgccc ggagagcggt tcctgtgcgg gggcatactc 480
127 atcagctcct gctggattct ctctgccgcc cactgcttcc aggagagggt tccgccccac 540
128 cacctgacgg tgatcttggg cagaacatac cgggtggtcc ctggcgagga ggagcagaaa 600
129 tttgaagtcg aaaaatacat tgtccataag gaattcgatg atgacactta cgacaatgac 660
130 attgcgctgc tgcagctgaa atcggattcg tcccgtctgt cccaggagag cagcgtggtc 720
131 cgcaactgtg gccttcccc gccggacctg cagctgccgg actggacgga gtgtgagctc 780
132 tccggctacg gcaagcatga ggcttgtct cctttctatt cggagcggct gaaggaggct 840
133 catgtcagac tgtacccatc cagccgctgc acatcacaa acattacttaa cagaacagtc 900
134 accgacaaca tgctgtgtgc tggagacact cggagcggcg ggccccaggc aaacttgcac 960
135 gacgcctgcc agggcgattc gggaggcccc ctggtgtgtc tgaacgatgg ccgcgatgact 1020
136 ttggtgggca tcatcagctg gggcctgggc tgtggacaga aggatgtccc ggggtgtgtac 1080
137 acaaaggtta ccaactacct agactggatt cgtgacaaca tgcgaccg 1128
140 <210> SEQ ID NO: 6
141 <211> LENGTH: 66
142 <212> TYPE: DNA
143 <213> ORGANISM: Escherichia coli
145 <400> SEQUENCE: 6
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147 gcggcc 66
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151 <211> LENGTH: 1065
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: Description of Artificial Sequence: coding
157 sequence for K2S protein
159 <400> SEQUENCE: 7
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161 ctaccagagt cgggtgcctc ctgcctccc tggaattcca tgatcctgat aggcaagggt 120
162 tacacagcac agaaccccag tgcccaggca ctgggcctgg gcaaacataa ttactgccgg 180
163 aatcctgatg gggatgccaa gccctggtgc cacgtgctga agaaccgcag gctgacgtgg 240
164 gagtactgtg atgtgccctc ctgctccacc tgcggcctga gacagtacag ccagcctcag 300
165 tttcgcatca aaggaggggt cttcgccgac atcgctccc acccctggca ggctgccatc 360
166 tttgccaaagc acaggagggt gcccgagag cggttcctgt gcgggggcat actcatcagc 420
167 tcctgctgga ttctctctgc cgccactgc ttccaggaga ggtttccgcc ccaccacctg 480
168 acggtgatct tgggcagaa acatccgggtg gtccctggcg aggaggagca gaaatttgaa 540
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170 ctgctgcagc tgaaatcgga ttcgtcccgc tgtgccagg agagcagcgt ggtccgcact 660
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172 tacggcaagc atgaggcctt gtctccttcc tattcgagc ggctgaagga ggctcatgtc 780
173 agactgtacc catccagccg ctgcacatca caacatttac ttaacagaac agtcaccgac 840
174 aacatgctgt gtgctggaga cactcggagc ggcgggcccc aggcaaaactt gcacgacgcc 900
175 tgccaggggcg attcggggagg cccctggtg tgtctgaacg atggccgcat gactttggtg 960
176 ggcacatca gctggggcct gggctgtgga cagaaggatg tcccgggtgt gtacacaaa 1020
177 gttaccaact acctagactg gattcgtgac aacatgcgac cgtga 1065

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182 <212> TYPE: PRT
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Description of Artificial Sequence: OmpA-K2S
187 fusion protein
189 <400> SEQUENCE: 8
190 Met Lys Lys Thr Ala Ile Ala Ile Ala Val Ala Leu Ala Gly Phe Ala
191 1 5 10 15
193 Thr Val Ala Gln Ala Ala Ser Glu Gly Asn Ser Asp Cys Tyr Phe Gly
194 20 25 30
196 Asn Gly Ser Ala Tyr Arg Gly Thr His Ser Leu Thr Glu Ser Gly Ala
197 35 40 45
199 Ser Cys Leu Pro Trp Asn Ser Met Ile Leu Ile Gly Lys Val Tyr Thr
200 50 55 60
202 Ala Gln Asn Pro Ser Ala Gln Ala Leu Gly Leu Gly Lys His Asn Tyr
203 65 70 75 80
205 Cys Arg Asn Pro Asp Gly Asp Ala Lys Pro Trp Cys His Val Leu Lys
206 85 90 95
208 Asn Arg Arg Leu Thr Trp Glu Tyr Cys Asp Val Pro Ser Cys Ser Thr
209 100 105 110
211 Cys Gly Leu Arg Gln Tyr Ser Gln Pro Gln Phe Arg Ile Lys Gly Gly
212 115 120 125
214 Leu Phe Ala Asp Ile Ala Ser His Pro Trp Gln Ala Ala Ile Phe Ala
215 130 135 140
217 Lys His Arg Arg Ser Pro Gly Glu Arg Phe Leu Cys Gly Gly Ile Leu
218 145 150 155 160
220 Ile Ser Ser Cys Trp Ile Leu Ser Ala Ala His Cys Phe Gln Glu Arg
221 165 170 175
223 Phe Pro Pro His His Leu Thr Val Ile Leu Gly Arg Thr Tyr Arg Val
224 180 185 190
226 Val Pro Gly Glu Glu Glu Gln Lys Phe Glu Val Glu Lys Tyr Ile Val
227 195 200 205
229 His Lys Glu Phe Asp Asp Asp Thr Tyr Asp Asn Asp Ile Ala Leu Leu
230 210 215 220
232 Gln Leu Lys Ser Asp Ser Ser Arg Cys Ala Gln Glu Ser Ser Val Val
233 225 230 235 240
235 Arg Thr Val Cys Leu Pro Pro Ala Asp Leu Gln Leu Pro Asp Trp Thr
236 245 250 255
238 Glu Cys Glu Leu Ser Gly Tyr Gly Lys His Glu Ala Leu Ser Pro Phe
239 260 265 270
241 Tyr Ser Glu Arg Leu Lys Glu Ala His Val Arg Leu Tyr Pro Ser Ser
242 275 280 285
244 Arg Cys Thr Ser Gln His Leu Leu Asn Arg Thr Val Thr Asp Asn Met
245 290 295 300
247 Leu Cys Ala Gly Asp Thr Arg Ser Gly Gly Pro Gln Ala Asn Leu His
248 305 310 315 320
250 Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Leu Asn Asp

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251          325          330          335
253 Gly Arg Met Thr Leu Val Gly Ile Ile Ser Trp Gly Leu Gly Cys Gly
254          340          345          350
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257          355          360          365
259 Trp Ile Arg Asp Asn Met Arg Pro Gly
260          370          375
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265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
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272 <400> SEQUENCE: 9
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274     1
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278 <211> LENGTH: 6
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280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: Description of Artificial Sequence: peptide
284     sequence
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287 Ser Glu Gly Asn Ser Asp
288     1           5
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293 <212> TYPE: PRT
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Description of Artificial Sequence: K2S 174-527
299 <400> SEQUENCE: 11
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301     1           5           10           15
303 Gly Thr His Ser Leu Thr Glu Ser Gly Ala Ser Cys Leu Pro Trp Asn
304          20           25           30
306 Ser Met Ile Leu Ile Gly Lys Val Tyr Thr Ala Gln Asn Pro Ser Ala
307          35           40           45
309 Gln Ala Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Gly
310          50           55           60
312 Asp Ala Lys Pro Trp Cys His Val Leu Lys Asn Arg Arg Leu Thr Trp
313     65           70           75           80
315 Glu Tyr Cys Asp Val Pro Ser Cys Ser Thr Cys Gly Leu Arg Gln Tyr
316          85           90           95
318 Ser Gln Pro Gln Phe Arg Ile Lys Gly Gly Leu Phe Ala Asp Ile Ala
319          100          105          110
321 Ser His Pro Trp Gln Ala Ala Ile Phe Ala Lys His Arg Arg Ser Pro

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VERIFICATION SUMMARY

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Input Set : A:\Seqlis-1

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L:15 M:270 C: Current Application Number differs, Replaced Current Application No

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date